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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,081	10/31/2003	Boaz Carmeli	IL920030027US1	1840

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EXAMINER	
MEW, KEVIN D	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,081	CARMELI ET AL.	
	Examiner	Art Unit	
	Kevin Mew	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/20/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Specification

1. The abstract of the disclosure is objected to because the title of the invention should be removed from the abstract page. Correction is required. See MPEP § 608.01(b).

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In particular, the legal phraseology such as "said" in line 6 of the abstract should be removed from the abstract.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

3. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.

(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

In particular, a brief summary of the invention is missing in the specification. It is recommended a brief summary of the invention be included in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Ghani et al. (USP 6,215,769).

Regarding claim 1, Ghani discloses a transmission unit (enhanced ACK Pacing Device, Fig. 5) comprising:

an aggregation unit (ACK control unit, element 510, Fig. 5) to aggregate in a buffer (aggregate in a ACK buffer, element 534, Fig. 5) at least two small messages received from an

upper layer (traffic measurements and data transmit notifications from link layer entity, col. 9, lines 36-46) into a packet (into an ACK packet, col. 9, lines 36-46) and to provide said packet to a pending queue (to provide ACK packet to an ACK buffer, col. 9, lines 36-46 and Fig. 5); and

a fireout unit (ACK scheduler, element 520, Fig. 5) to pass packets (to emit ACK packets) to a network device (to a TCP source) by selecting packets from said pending queue (emitting ACK packets from the ACK buffer at a chosen rate, col. 9, lines 42-48) or said buffer depending on whether or not said pending queue is empty (depending whether the ACK buffer is overflow or underflow, col. 9, lines 36-52).

Regarding claim 2, Ghani discloses a unit according to claim 1 and also comprising a reception monitor to indicate to fireout unit (data packet departure processor 514 to indicate to the ACK scheduler, col. 11, lines 10-15) the status of reception of said packets (the traffic measurements and data transmit notifications, col. 9, lines 36-46).

Regarding claim 3, Ghani discloses a unit according to claim 1 and wherein said fireout unit operates at a rate related to network congestion (ACK scheduler operates at an appropriately chosen rate related to congestion, col. 9, lines 36-52).

Regarding claim 4, Ghani discloses a unit according to claim 3 and wherein said network congestion may be any one of the following: transmitter congestion (transmitter congestion, col. 11, lines 10-15), receiver congestion and congestion of network elements.

Regarding claim 5, Ghani discloses a transmission unit (Enhanced ACK Pacing Device, element 500, Fig. 5) comprising:

a transmitting network device (ACK control unit, element 510, Fig. 5);

means (ACK buffers) for adjusting the size of aggregated packets produced by said network device (for adjusting the size of aggregate ACK packets produced by ACK control unit) based at least on network congestion (based on traffic measurements/network congestion, col. 9, lines 36-52).

Regarding claim 6, Ghani discloses a transmission unit according to claim 5 and wherein said means for adjusting comprises:

an aggregation unit (ACK control unit, element 510, Fig. 5) to aggregate in a buffer (aggregate in a ACK buffer, element 534, Fig. 5) at least two small messages received from an upper layer (traffic measurements and data transmit notifications from link layer entity, col. 9, lines 36-46) into a packet (into an ACK packet, col. 9, lines 36-46) and to provide said packet to a pending queue (to provide ACK packet to an ACK buffer, col. 9, lines 36-46 and Fig. 5); and

a fireout unit (ACK scheduler, element 520, Fig. 5) to pass packets (to emit ACK packets) to a network device (to a TCP source) by selecting packets from said pending queue (emitting ACK packets from the ACK buffer at a chosen rate, col. 9, lines 42-48) or said buffer depending on whether or not said pending queue is empty (depending whether the ACK buffer is overflow or underflow, col. 9, lines 36-52).

Regarding claim 7, Ghani discloses a unit according to claim 6 and also comprising a reception monitor to indicate to fireout unit (data packet departure processor 514 to indicate to the ACK scheduler, col. 11, lines 10-15) the status of reception of said packets (the traffic measurements and data transmit notifications, col. 9, lines 36-46).

Regarding claim 8, Ghani discloses a unit according to claim 5 and wherein said network congestion may be any one of the following:

transmitter congestion (transmitter congestion, col. 11, lines 10-15), receiver congestion and congestion of network elements.

Regarding claim 9, Ghani discloses a software product comprising:

a computer usable medium having computer readable program code means (Fig. 6) embodied therein for causing transmission of packets to a network (data packet departure algorithm for causing transmission of packets to a TCP source, Fig. 6), the computer readable program code means in said software product comprising:

computer readable program code means (Fig. 6) for causing a computer (ACK control unit, element 510, Fig. 5) to aggregate in a buffer (aggregate in a ACK buffer, element 534, Fig. 5) at least two small messages received from an upper layer (traffic measurements and data transmit notifications from link layer entity, col. 9, lines 36-46) into a packet (into an ACK packet, col. 9, lines 36-46) and to provide said packet to a pending queue (to provide ACK packet to an ACK buffer, col. 9, lines 36-46 and Fig. 5); and

computer readable program code means for causing the computer to pass packets (ACK scheduler emitting ACK packets, element 520, Fig. 5) to a network device (to a TCP source),

selecting said packets from said pending queue (emitting ACK packets from the ACK buffer at a chosen rate, col. 9, lines 42-48) or said buffer depending on whether or not said pending queue is empty (depending whether the ACK buffer is overflow or underflow, col. 9, lines 36-52).

Regarding claim 10, Ghani discloses a product according to claim 9 and also comprising code means for causing a computer to indicate to said second code means the status of reception of said packets (indicating the traffic measurements and data transmit notifications, col. 9, lines 36-46).

Regarding claim 11, Ghani discloses a product according to claim 9 and wherein said second code means operates at a rate related to network congestion (ACK scheduler operates at an appropriately chosen rate related to congestion, col. 9, lines 36-52).

Regarding claim 12, Ghani discloses a product according to claim 12 and wherein said network congestion may be any one of the following: transmitter congestion (transmitter congestion, col. 11, lines 10-15), receiver congestion and congestion of network elements.

Regarding claim 13, Ghani discloses a method comprising:

adjusting the size of aggregated packets (adjusting the size of aggregate ACK packets stored in the ACK buffers) based at least on the congestion of a transmitting network device (based on traffic measurements/network congestion of a link layer entity, col. 9, lines 36-52).

Regarding claim 14, Ghani discloses a method according to claim 13 and wherein said adjusting comprises:

aggregating in a buffer (aggregate in a ACK buffer, element 534, Fig. 5) at least two small messages received from an upper layer (traffic measurements and data transmit notifications from link layer entity, col. 9, lines 36-46) into a packet (into an ACK packet, col. 9, lines 36-46);

providing said packet to a pending queue (to provide ACK packet to an ACK buffer, col. 9, lines 36-46 and Fig. 5);

passing packets (ACK scheduler emitting ACK packets, , element 520, Fig. 5) to a network device (to a TCP source); and

selecting said packets from said pending queue (emitting ACK packets from the ACK buffer at a chosen rate, col. 9, lines 42-48) or said buffer depending on whether or not said pending queue is empty (depending whether the ACK buffer is overflow or underflow, col. 9, lines 36-52).

Regarding claim 15, Ghani discloses a method according to claim 14 and also comprising indicating the status of reception of said packets (indicating the traffic measurements and data

transmit notifications, col. 9, lines 36-46).

Regarding claim 16, Ghani discloses a method according to claim 14 and wherein said passing operates at a rate related to network congestion (ACK scheduler operates at an appropriately chosen rate related to congestion, col. 9, lines 36-52).

Regarding claim 17, Ghani discloses a method according to claim 16 and wherein said network congestion may be any one of the following: transmitter congestion (transmitter congestion, col. 11, lines 10-15), receiver congestion and congestion of network elements.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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